

D.14 Environmental Justice

Background

On February 11, 1994, President Clinton issued an “Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” designed to focus attention on environmental and human health conditions in areas of high minority populations and low-income communities, and promote non-discrimination in programs and projects substantially affecting human health and the environment (White House, 1994). The order requires the U.S. Environmental Protection Agency (EPA) and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

In 1997, the U.S. EPA’s Office of Environmental Justice released the *Environmental Justice Implementation Plan*, supplementing the EPA environmental justice strategy and providing a framework for developing specific plans and guidance for implementing Executive Order 12898. Federal agencies received a framework for the assessment of environmental justice in the EPA’s *Guidance for Incorporating Environmental Justice Concerns in EPA’s NEPA Compliance Analysis* in 1998. This approach emphasizes the importance of selecting an analytical process appropriate to the unique circumstances of the potentially affected community.

While many state agencies have utilized the EPA’s *Environmental Justice Implementation Plan* as a basis for the development of their own environmental justice strategies and policies, as of yet the majority of California state agencies do not have guidance for incorporation of environmental justice impact assessment into CEQA analysis. The State Air Resources Board has, for example, examined this issue and has received advice from legal counsel, by a memorandum entitled “CEQA AND ENVIRONMENTAL JUSTICE”. This memorandum states, in part, “For the reasons set forth below, we will conclude that CEQA can readily be adapted to the task of analyzing cumulative impacts/environmental justice whenever a public agency (including the Air Resources Board (ARB), the air pollution control districts, and general purpose land use agencies) undertakes or permits a project or activity that may have a significant adverse impact on the physical environment. All public agencies in California are currently obliged to comply with CEQA, and no further legislation would be needed to include an environmental justice analysis in the CEQA documents prepared for the discretionary actions public agencies undertake.”

Under AB 1553, signed into law in October 2001, the Governor’s Office of Planning and Research (OPR) is required to adopt guidelines for addressing environmental justice issues in local agencies’ general plans. Currently, the OPR is in the process of updating the General Plan Guidelines to incorporate the requirements of AB 1553.

California State Lands Commission Policy

The California State Lands Commission (CSLC) has developed and adopted an Environmental Justice Policy to ensure equity and fairness in its own processes and procedures. The CSLC adopted an amended Environmental Justice Policy on October 1, 2002, to ensure that “Environmental Justice is an essential consideration in the Commission’s processes, decisions and programs and that all people who live in California have a meaningful way to participate in these activities.” The policy stresses

equitable treatment of all members of the public and commits to consider environmental justice in its processes, decision-making, and regulatory affairs which is implemented, in part, through identification of, and communication with, relevant populations that could be adversely and disproportionately impacted by CSLC projects or programs, and by ensuring that a range of reasonable alternatives is identified that would minimize or eliminate environmental impacts affecting such populations. This discussion is provided in this document consistent with and in furtherance of the Commission's Environmental Justice Policy. The staff of the CSLC is required to report back to the Commission on how environmental justice is integrated into its programs, processes, and activities (CSLC, 2002).

Regional and local environmental justice assessments have been performed by agencies within the study area, such as the Bay Area Metropolitan Transportation Commission's (MTC) *2001 Regional Transportation Plan Equity Analysis and Environmental Justice Report*. Methods applied in this EIR analysis are consistent with those used in the MTC report.

This section analyzes the distributional patterns of high-minority and low-income populations on a regional basis and characterizes the distribution of such populations adjacent to the proposed and alternative pipeline corridors. This analysis focuses, in the main, on whether the Proposed Project's impacts have the potential to affect area(s) of high-minority population(s) and low-income communities disproportionately and thus create an adverse environmental justice impact.

D.14.1 Environmental Baseline

The study area for the project includes Contra Costa, Sacramento, Solano, and Yolo Counties. For the purposes of this environmental justice analysis, the areas examined for potential effect by the Proposed Project, Existing Pipeline ROW Alternative, and the No Project Alternative, are one-mile wide corridors (one-half mile on either side of the centerline of the pipeline) traversing over 70 miles through the four-county study area. Other recent environmental justice studies have analyzed areas of potential effect ranging from a one-half mile out to a six-mile distance away from proposed projects, although a one-half mile radius from the project is considered acceptable (Glickman, 1994; CPUC/ANF, 1996; CPUC/BLM, 1996; Sadd, 1999; CEC, 2003).

D.14.1.1 Regional Overview

The census block group is used as the base component for the information used in this EIR to evaluate the potential for the Proposed Project, Existing Pipeline ROW Alternative and No Project Alternative to cause disproportionate impacts, in particular, to high-minority and low-income populations. Baseline data provided in this section is from the 2000 U.S. Census of Population (Census, 2003). The block groups and their characteristics provide information at a scale that is amenable to and appropriate for a regional and corridor-level analysis. The following information for each block group was utilized in this analysis:

- Black/African-American population.
- Hispanic population.
- Asian population.
- Hawaiian/Pacific Islander population.
- Native American population.
- Total population.
- Per-capita income.

There are approximately 1,700 census block groups in the four-county study area. Census block groups generally have a total population size between 600 and 3,000 people per block group. The 2000

Census states that the preferred block group population size is 1,500 people (Census, 2000). The proposed and alternative pipeline corridors, including the existing pipeline, cross at least some portion of 160 block groups.

Identification of impacts related to environmental justice is not solely a matter of identifying whether there are high-minority and low-income populations that could be affected by a project. To determine if a project could *disproportionately* affect a high-minority or low-income population, it must also be determined how the project, and its potential alternatives, would affect other segments of the population. For example, if there are more high-income populations affected by a project than low-income populations, then the potential for disproportionate impacts to the low-income population, and thus the potential for environmental justice impacts, is low. If the proportion of low-income and high-minority populations impacted by a project is greater than either the middle- or high-income populations or the middle- or low-minority populations, then there is more of a potential for an environmental justice impact.

Minority Populations

For the purposes of this analysis, the total minority population for each census block group has been calculated as follows:

- Total minority population = Black/African-American + Hispanic + Asian + Hawaiian/Pacific Islander + Native American (without double-counting non-white Hispanics falling into the Black/African-American, Asian, Hawaiian/Pacific Islander, and Native American categories).

Census definitions have been used in calculating these numbers (Census, 2003). All of the block groups in each county are categorized by minority population percentage into three statistical categories that each has the same number of block groups, so that each category has one-third of the total number of block groups. Table D.14-1 indicates the parameters used to define the classifications for each of the counties being considered.

Table D.14-1. Census Block Group Classification by Total Minority Population Percentage

Block Group Classification	Minority Population Percentage			
	Contra Costa County	Sacramento County	Solano County	Yolo County
Upper-third	> 55.8%	> 51.4%	> 69.5%	> 64.7%
Middle-third	24.9% - 55.8%	24.3% - 51.4%	40.6% - 69.5%	38.7% - 64.7%
Lower-third	< 24.9%	< 24.3%	< 40.6%	< 38.7%
County Minority Percentage				
Census 2000	47.8%	43.0%	55.3%	52.8%

>: greater than <: less than

Areas of high-minority populations and their locations are identified on a county-by-county basis as those block groups having a total minority population percentage within the highest one-third (33 1/3% in terms of minority percentage) of all block groups in their respective county. These groups are classified as Upper-Third Minority Block Groups. Those block groups having a total minority population percentage within the lowest one-third (33 1/3%) of the block groups in their counties are classified as Lower-Third Minority Block Groups. Those block groups having a total minority population percentage that is greater than the upper bound of minority population percentage for the Lower-Third Minority Block Groups, but less than the lower bound for the Upper-Third Minority Block Groups, are classified as Middle-Third Minority Block Groups.

Low-Income Populations

Areas of low-income populations and their locations are identified on a county-by-county basis as those census block groups having an annual per-capita income level that is in the lowest one-third (33 1/3%) of the block groups in their respective counties. These block groups are classified as Lower-Third Income Block Groups. Those block groups having an annual per-capita income level in the highest one-third (33 1/3%) of the block groups in their respective counties are classified as Upper-Third Income Block Groups. Those block groups having an annual per-capita income level that is greater than the upper bound for the Lower-Third Income Block Groups, but less than the lower bound of the Upper-Third Income Block Groups, are classified as Middle-Third Income Block Groups. Thus, all of the block groups in a county are divided into the highest one-third, a middle one-third, and the lowest one-third in terms of medium per-capita income. Table D.14-2 indicates the parameters used to define the classifications for the four counties studied.

Table D.14-2. Census Block Group Classification by Annual Per-Capita Income

Block Group Classification	Income			
	Contra Costa County	Sacramento County	Solano County	Yolo County
Lower-third	< \$21,250	< \$16,287	< \$18,257	< \$14,545
Middle-third	\$21,250 - \$32,514	\$16,287 - \$24,256	\$18,257 - \$23,547	\$14,545 - \$23,547
Upper-third	> \$32,514	> \$24,256	> \$23,547	> \$23,547
County Annual Per-Capita Income				
Census 2000	\$30,615	\$21,142	\$21,731	\$19,365

>: greater than <: less than

D.14.1.2 Environmental Setting: Proposed Project

The study area for the Proposed Project consists of northern Contra Costa County, western Sacramento County, eastern Solano County, and southeastern Yolo County. As stated previously, the geographic unit of analysis used is the census block group. Table D.14-3 shows the 2000 Census population count, number of census block groups, and average population per block group for each county in the study area.

Table D.14-3. 2000 Census County Population and Block Group Data

County	Year 2000 Population	Census Block Groups	Persons per Block Group
Contra Costa County	948,816	568	1,670
Sacramento County	1,223,499	792	1,545
Solano County	394,542	241	1,637
Yolo County	168,660	99	1,704

Approximately 67 block groups have at least some portion of their area within one-half mile (on either side) of the centerline of the Proposed Project route. All of the block groups in the study area have been classified, with respect to minority population percentage and annual per-capita income, in accordance with the criteria discussed in Section D.14.1.1 and presented in Tables D.14-1 and D.14-2. The results of this classification are summarized in Table D.14-4 and are presented in Figures D.14-1 and D.14-2.

Table D.14-4. Data Matrix for Analysis of Relative Impacts on Minority and Low-Income Populations

County	Block Group Classification	Countywide (No., %**)	Proposed Pipeline Corridor* (No., %**)	Existing Pipeline Corridor* (No., %**)
Contra Costa County	Upper-third minority	189 (33.3%)	1 (12.5%)	1 (14.3%)
	Middle-third minority	189 (33.3%)	5 (62.5%)	5 (71.4%)
	Lower-third minority	190 (33.4%)	2 (25.0%)	1 (14.3%)
	Lower-third income	190 (33.4%)	6 (75.0%)	5 (71.4%)
	Middle-third income	189 (33.3%)	2 (25.0%)	2 (28.6%)
	Upper-third income	189 (33.3%)	0 (0.0%)	0 (0.0%)
	Total (all) block groups	568 (100%)	8 (100%)	7 (100%)
Sacramento County	Upper-third minority	263 (33.2%)	2 (66.6%)	1 (50.0%)
	Middle-third minority	264 (33.3%)	0 (0.0%)	0 (0.0%)
	Lower-third minority	265 (33.5%)	1 (33.3%)	1 (50.0%)
	Lower-third income	264 (33.3%)	2 (66.6%)	1 (50.0%)
	Middle-third income	264 (33.3%)	0 (0.0%)	0 (0.0%)
	Upper-third income	264 (33.3%)	1 (33.3%)	1 (50.0%)
	Total (all) block groups	792 (100%)	3 (100%)	2 (100%)
Solano County	Upper-third minority	80 (33.2%)	14 (35.9%)	20 (38.5%)
	Middle-third minority	80 (33.2%)	16 (41.0%)	20 (38.5%)
	Lower-third minority	81 (33.6%)	9 (23.1%)	12 (23.0%)
	Lower-third income	81 (33.6%)	20 (51.3%)	25 (48.1%)
	Middle-third income	80 (33.2%)	(33.3%)	17 (32.7%)
	Upper-third income	80 (33.2%)	6 (15.3%)	10 (19.2%)
	Total (all) block groups	241 (100%)	39 (100%)	52 (100%)
Yolo County	Upper-third minority	33 (33.3%)	5 (29.4%)	7 (21.9%)
	Middle-third minority	33 (33.3%)	5 (29.4%)	12 (37.5%)
	Lower-third minority	33 (33.3%)	7 (41.2%)	13 (40.6%)
	Lower-third income	33 (33.3%)	7 (41.2%)	14 (43.8%)
	Middle-third income	33 (33.3%)	5 (29.4%)	10 (31.3%)
	Upper-third income	33 (33.3%)	5 (29.4%)	8 (25.0%)
	Total (all) block groups	99 (100%)	17 (100%)	32 (100%)

* Census Block Groups intersecting or within the one-mile wide pipeline corridor defined by the area within one-half mile of the centerline of the proposed pipeline or alternative route.

** Percent is of the total number of block groups in the County or pipeline corridor study area within the County, whichever is applicable.

D.14.1.3 Segment by Segment Setting

This section details the number and type of block groups that may be affected by the Proposed Project as such are delineated in each segment of the route.

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

Contra Costa County has a total of eight census block groups that lie within one-half mile of the Proposed Project pipeline route. Of the eight, only one (12.5% of affected blocks), located in Concord, is classified as an upper-third minority block group. Six (75.0% of affected blocks) of the eight block groups, however, are classified as lower-third income block groups.

Phase 1 and 2 Carquinez Strait Crossing

As there are no residences in the vicinity of the Carquinez Strait crossing, neither Phase 1 nor the potential Phase 2 of the Carquinez Strait crossing would generate environmental justice impacts.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

Segment 2, which traverses from the Solano County side of the Carquinez Strait, through Benicia into unincorporated Solano County, and up to Cordelia, passes through no upper-third minority or lower-third income census block groups. The area along the pipeline corridor has few residences in the vicinity of the pipeline.

Segment 3 (MP 17.6–24.5) – Cordelia

Segment 3, also in Solano County, runs from Cordelia through unincorporated areas to the outskirts of Suisun City. Segment 3 passes through no lower-third income block groups. Although Segment 3 passes through one upper-third minority block group, as shown in Table D.14-4, more middle-third minority block groups (41.0% of affected blocks) in Solano County fall within the proposed route corridor than upper-third minority block groups (35.9% of affected blocks).

Impacts of Cordelia Mitigation Segment

This mitigation segment was developed to avoid sensitive biological and water resources within Cordelia Marsh and Slough. The 2.6-mile segment diverges from the proposed route at MP 17.6 and rejoins the proposed route at approximately MP 20.0. The Cordelia Mitigation Segment parallels Ramsey Road until Cordelia Road, where it continues along Cordelia Road to the UPRR ROW where it rejoins the proposed route (see Figure D.4-3).

The two routes are within similar census block groups.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

Segment 4 continues to cross Solano County, running from Suisun City and Fairfield to Vacaville Junction. Segment 4 passes through 13 of 14 upper-third minority block groups and 13 of 20 lower-third income block groups, eight of which are both upper-third minority and lower-third income block groups. Lower-third income block groups in Solano County make up 51.3% of the total groups within the Proposed Pipeline corridor.

Segment 5 (MP 30.7–65.1) – Yolo County Agricultural Area

Segment 5 begins in unincorporated Solano County near Vacaville Junction, running east, following railroad ROWs and transmission corridors northeast into Yolo County through mostly agricultural lands. Segment 5 traverses four block groups in Solano County, two of which are lower-third income block groups, and one that is an upper-third minority block group. Both of the lower-third income and upper-third minority block groups are large, sparsely populated areas.

Similarly in Yolo County, the pipeline corridor would traverse two upper-third minority block groups and three lower-third income block groups, all of which are largely rural, agricultural areas. As Table D.14-4 shows, in Yolo County, similar to Solano County, the pipeline corridor crosses fewer upper-third minority block groups (29.4% of affected blocks) than lower-third minority block groups (41.2%

of affected blocks). The pipeline corridor crosses more lower-third income block groups than other block groups in both counties.

Segment 6 (MP 65.1–69.9) – West Sacramento

Segment 6 runs east from unincorporated Yolo County into West Sacramento, terminating at the SFPP Sacramento Station on the west side of the Sacramento River. The one-mile wide impact area corridor extends across the river, including sections of three census block groups in Sacramento County. In West Sacramento, while the pipeline would proceed past a number of churches and recreation areas, the pipeline enters a heavy industrial area where it terminates at the Sacramento Station. In Yolo County, Segment 6 crosses six lower-third income block groups and three upper-third minority block groups within the pipeline corridor. In Sacramento County, the pipeline corridor would be adjacent to two lower-third income and upper-third minority block groups adjacent to industrial areas.

Segment 7 – Wickland Connection

The Wickland Connection follows an existing levee from MP 65.6 in Yolo County for approximately 4,000 feet. The pipeline corridor for this connection would cross three lower-third income and upper-third minority block groups, one of which is a large, mainly agricultural block group. The area through which the pipeline traverses is a light industrial area, with warehouse yards and garbage transfer facilities and a number of sites with potential for contamination. Although there are clusters of upper-third minority and lower-third income populations within one-half mile of the proposed pipeline, the majority of these clusters are widely dispersed and have very low population densities.

D.14.1.4 Environmental Setting: Existing Pipeline ROW Alternative

As with the Proposed Project, the study area for the Existing Pipeline ROW Alternative consists of northern Contra Costa County, western Sacramento County, eastern Solano County, and southeastern Yolo County.

Census block groups were again used for the analysis of the Existing Pipeline ROW Alternative. Approximately 93 block groups have at least some portion of their area within one-half mile (on either side) of the centerline of the Existing Pipeline ROW Alternative route. All block groups for the Existing Pipeline ROW Alternative have been classified as discussed above in Section D.14.1.2. The results of this classification are summarized in Table D.14-4 and are presented in Figures D.14-1 and D.14-2.

D.14.1.5 Environmental Setting: No Project Alternative

The study area for the No Project Alternative consists of northern Contra Costa County, western Sacramento County, eastern Solano County, and southeastern Yolo County as defined in the Existing Pipeline ROW Alternative. Unlike the Proposed Project and Existing Pipeline ROW Alternative, the area of effect, in the near term, of the No Project Alternative, with respect to environmental justice impacts, is limited to potential impacts of “normal pipeline operation”. The potential effects of supplying demand above the capacity of the existing system are not quantifiable because transportation alternatives are not well enough defined to determine whether any one census block group is more likely than another to be impacted by such alternatives, e.g., tanker truck or rail traffic.

D.14.2 Environmental Impacts and Mitigation Measures for the Proposed Project

Key elements of the analysis throughout the following sections include consideration of:

- Disproportionate impact(s) burden on areas of high-minority and low-income populations along the routes (due to location and pattern of impact or difficulty to mitigate);
- Disproportionate impact(s) when considering existing conditions or locational patterns for existing impact sources and burdens;
- Factors that influence or increase/exacerbate any disproportionalities noted; and
- Mitigation measures, as required, to reduce impacts, especially if such impacts occur disproportionately to such populations.

It should be noted, however, that if disproportionate numbers of upper-third minority block groups or lower-third income block groups are affected, such does not necessarily mean that those groups are being disproportionately impacted. Other factors such as the intensity and duration of the impacts, as well as proximity to the impacts must also be considered.

D.14.2.1 Definition and Use of Significance Criteria

An environmental justice impact would be considered significant if project construction or operation, in the new or the existing ROW, would cause any high-minority or low-income population to bear a disproportionate share of an impact or impacts whether mitigated or not to a level of insignificance as provided in this EIR.

All of the census block groups in the study area have been classified with respect to minority population percentage and per-capita income in accordance with the criteria discussed in Section D.14.1, and presented in Tables D.14-1 and D.14-2. The results of this classification are presented in Table D.14-4 and Figures D.14-1 and D.14-2.

D.14.2.2 Impacts of the Proposed Project

This section examines the Proposed Project to determine whether impacts identified in the preceding analyses could affect high-minority and low-income populations disproportionately, and whether impacts from construction, operation or accidents could combine with existing impact sources and burdens to exacerbate any inequities by reason of existing conditions.

Impacts EJ-1 (pipeline construction) and EJ-3 (normal pipeline operation) would affect each segment similarly, and with the implementation of the mitigation measures described in other sections, these impacts would be reduced to less than significant levels and would not disproportionately affect identified populations. Therefore, these impacts are not specifically addressed for each segment.

D.14.2.3 Impacts of Pipeline Construction

Impact EJ-1: Disproportionate Impacts from Project Construction

Construction activities could disproportionately affect areas of high-minority or low-income populations. (Less than Significant)

Figure D.14-1. Census Block Group Minority Percentage Classifications

Figure D.14-2. Census Block Group Per-Capita Income Classifications

Impact Discussion

Analysis of construction impacts in all other disciplines is presented in other parts of Section D, and mitigation measures are presented in each section to ensure that construction impacts would be reduced to less than significant. The only construction-related impact identified that cannot be mitigated to a less than significant level is a result of construction equipment exhaust and particulate emissions (see Section D.3, Impact A-1). This significant impact is a result of construction emissions that would exceed emission standards of the Yolo/Solano Air Quality Management District. The impact contributes to the District's emissions inventory within the air basin. However, such emissions would be short term in nature. Because the impact will occur along the entirety of the pipeline route, impacts to populations along the route would likely be distributed evenly within each of the affected census block groups. The projected impacts could also affect additional members of the air basin's population outside of the defined areas of effect. Therefore, identified areas of high-minority, 19 of 56 affected blocks, and low-income populations, 27 of 56 affected blocks, would not be, overall, disproportionately affected and environmental justice related impacts, from construction emissions, would be less than significant.

Mitigation Measures for Impact EJ-1: Disproportionate Impacts from Project Construction

None are required.

Residual Impact: None.

D.14.2.4 Impacts of Pipeline Accidents

Impact EJ-2: Disproportionate Impacts from a Pipeline Accident

A pipeline accident spill could result in disproportionate impacts to high-minority or low-income populations. (Potentially Significant)

Impact Discussion

A number of technical sections in the EIR (including Pipeline Safety and Risk of Accidents; Geology, Soils and Paleontology; Hydrology and Water Quality; Land Use, Public Recreation, and Special Interest Areas; and Recreational and Commercial Fisheries) have identified significant and unmitigable impacts that would result from pipeline accidents (see Sections D.2, D.6, D.7, D.9, and D.14 respectively). In analyzing the impact of pipeline accidents, instead of examining a one-mile wide corridor as with the analysis of pipeline construction impacts, the pipeline accident analysis focuses on the census block groups through which the pipeline would pass. The one-mile wide pipeline corridor enters block groups in all four counties in the study area, but the proposed pipeline only passes through block groups in Contra Costa, Solano, and Yolo Counties. The following discussion addresses the number and type of block groups that may be affected by the Proposed Project as such are delineated in each segment of the route.

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

There is the potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) to occur in Segment 1 for lower-third income block groups.

Study of the pipeline corridor in this area shows that it would follow existing transmission and pipeline corridors in a heavy industrial area with oil refineries and auto salvage facilities. Clusters of commer-

cial and residential areas are located along the pipeline route adjacent to highly industrial areas. Oil and gas pipelines are found throughout the study region in lower- and middle-third income block groups, both within and outside industrial areas. Therefore, there is the potential that this additional pipeline would disproportionately affect upper-third minority and lower-third income block groups.

Phase 1 and 2 Carquinez Strait Crossing

As there are no residences in the vicinity of the Carquinez Strait crossing, neither Phase 1 nor Phase 2 of the Carquinez Strait crossing would generate environmental justice impacts. There would be no additional impacts created by the Phase 2 directional drilling activities.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

The likelihood for the occurrence of Impact EJ-2 (disproportionate impacts from a pipeline accident) in Segment 2 is low; therefore, there are no disproportionate impacts to high-minority or low-income populations.

Segment 3 (MP 17.6–24.5) – Cordelia

Upper-third minority block groups in Solano County are not disproportionately affected. There appears to be no basis, as with Segment 1, to expect that the proposed pipeline would disproportionately affect upper-third minority and lower-third income block groups. There is little potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) in Segment 3, and there are no disproportionate environmental justice impacts expected.

Impacts of Cordelia Mitigation Segment

The environmental justice impacts and mitigation measures for the Cordelia Mitigation Segment would be similar to those of the Proposed Project, since the two routes are within similar census block groups. There is little potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) along the Cordelia Mitigation Segment, and there are no disproportionate environmental justice impacts expected.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

There is the potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) to occur in Segment 4 for lower-third income block groups. As mentioned under Segment 3, however, the route crosses fewer upper-third minority block groups in Solano County than other block groups.

The route passes adjacent to a cluster of residential areas and apartments for approximately two miles, but the majority of the area within the pipeline corridor has a low population density and the few scattered occurrences of houses are situated away from the route. However, given the area of population density and the overall 51.3% of lower-third income in the block groups, there is the potential for pipeline accidents along this portion of the proposed pipeline to disproportionately affect high-minority and low-income block groups (Impact EJ-2).

Segment 5 (MP 30.7–65.1) – Yolo County Agricultural Area

There is the potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) to occur in Segment 5 for lower-third income block groups.

Because of the low population density and scattered location of the populations away from the pipeline route in these block groups, however, accidents along the proposed pipeline are not expected to disproportionately affect high-minority and low-income populations in Segment 5.

Segment 6 (MP 65.1–69.9) – West Sacramento

There is the potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) to occur in Segment 6 for lower-third income block groups.

As with Segment 1, existing oil and gas pipelines are found throughout the area in lower- and middle-third income block groups, both within and outside industrial areas. There is the potential for a pipeline accident to impact more upper-third minority and lower-third income block groups, so Impact EJ-2 would apply.

Segment 7 – Wickland Connection

There is little potential for Impact EJ-2 (disproportionate impacts from a pipeline accident) in Segment 7. As above, with Segment 1 and Segment 6, existing oil and gas pipelines are found throughout the area in lower- and middle-third income block groups, both within and outside industrial areas.

Impact Discussion EJ-2, continued.

Table D.14-4 shows that in Contra Costa, Solano, and Yolo Counties, there are fewer upper-third minority block groups within the pipeline corridor than other minority block groups. As such, the potential for disproportionate impacts to high-minority populations from the project, in toto, are low. More lower-third income block groups are affected than other block groups in these three counties. This analysis will then focus on the potential frequency of pipeline accidents in lower-third income block groups.

The accident data provided in Section D.2, Pipeline Safety and Risk of Accidents, concludes that a small accident (>1 bbl) would occur once every 363 years on a given one-mile segment, a medium accident (>100 bbl) would occur once every 1,199 years on a given one-mile segment, a large accident (>1,000 bbl) would occur once every 2,607 years on a one-mile segment, and a very large accident (>10,000 bbl) would occur once every 14,595 years. By comparing the lengths of pipeline route through lower-third income block groups to the accident data above, a frequency can be estimated of how often spills could occur in these locations. The pipeline crosses a total of approximately 22.1 miles of lower-third income block group lands. Of this total, 16.3 miles of pipeline crosses large, agricultural areas with very low population density and widely dispersed population clusters. There is no basis to expect that a pipeline accident in these areas would create a disproportionate impact on low-income populations. For this reason, the analysis will focus on the remaining 5.8 miles of pipeline traversing low-income, higher population density block groups.

Table D.14-5 lists the spill frequency for the lower-third income block groups that the pipeline would cross. The anticipated lifetime of the proposed pipeline is 50 years. Small and medium spills, while they occur more frequently, have a magnitude below that which could affect people, so are considered minor and a less than significant impact. The large and very large spills would have a more substantial impact due to the quantity spilled and

Table D.14-5. Spill Frequency in Lower-Third income Block Groups

Spill Size	Spill Frequency
Small (>1 bbl)	Once in 67.8 years
Medium (>100 bbl)	Once in 206.7 years
Large (>1,000 bbl)	Once in 449.5 years
Very large (>10,000)	Once in 2,516.4 years

the increased potential for fire and/or explosion, but would occur much less frequently. Section D.2 (Pipeline Safety and Risk of Accidents) discusses the relationship between frequency and severity of accidental spills and the resultant risk to human safety. A large or very large accidental spill, and its associated effects on safety, water quality, land use, and fishing (as described in Sections D.2, D.6, D.8, D.9, and D.14), could have a significant environmental impact should the spill occur in any of the census block groups through which it passes. An environmental justice impact would occur if accidents or spills occurred predominately or repeatedly in areas of high-minority or low-income populations. The possibility that such spills might occur, disproportionately, in such areas is no greater than in other areas along the route. The impact of any spill can be mitigated to a level that is not significant by ensuring that such populations can react to a spill and its impacts in a manner comparable to other populations and that mitigation of impacts is implemented in a fair and equitable manner for all populations within the defined area of potential effects. Implementation of Mitigation Measure EJ-2a would reduce any potential of a disproportionate environmental justice impact to a less than significant level.

Mitigation Measure for Impact EJ-2: Disproportionate Impacts from an Accidental Spill

EJ-2a Spill Containment and Response. The Applicant shall ensure that the spacing of spill containment and response equipment along the pipeline is determined by the density of hazard factors and populations at risk along the pipeline route. This information shall be documented in the Supplemental Spill Response Plan (see Mitigation Measure S-2d in Section D.2).

Residual Impact. With implementation of EJ-2a, environmental justice impacts from an accidental spill would be less than significant and would not impact high-minority or low-income populations disproportionately.

D.14.2.5 Impacts of Pipeline Operation

Impact EJ-3: Disproportionate Effects of Normal Pipeline Operation

The normal operation of the pipeline could disproportionately affect high-minority or low-income populations. (Less than Significant)

Impact Discussion

The Proposed Project would represent a minor incremental increase in the intensification of industrial development along the proposed corridor. The proposed pipeline route would utilize and add length to the existing 14-inch pipeline crossing of the Carquinez Strait. Unlike other aboveground industrial uses, normal operation of the pipeline would not generate significant air quality, traffic, noise, or visual impacts once in place. The incremental long-term impact on adjacent land uses would be the low-level risk of an accidental oil spill and associated public safety concerns as addressed in Section D.14.3.4 and the minor traffic from routine pipeline inspection and maintenance activities. Because operation itself does not result in significant impacts, there is no reason to expect that high-minority and low-income populations would be affected disproportionately by operation of the Proposed Project.

Mitigation Measures: None required.

Residual Impact: None.

D.14.2.6 Impacts of Proposed Station Changes

Construction of the station changes for the Proposed Project will create increases in traffic, noise, and air emissions from construction equipment at both the Concord and Sacramento Stations. Neither station is in census block groups, which are classified as upper-third minority or lower-third income. There is one upper-third minority block group and three lower-third income block groups located within one-half mile of the Concord Station and two upper-third minority block groups and four lower-third income block groups within one-half mile of the Sacramento Station. All of these, however, are at the periphery of the one-half mile radius, and have few occurrences of residences in the vicinity of the stations. Construction at the Concord and Sacramento Stations would be unlikely to impact these populations.

Operation of the stations following the changes associated with the Proposed Project would not change the ways, if any, that the existing Concord and Sacramento Stations affect minority and low-income populations. The census block groups in the vicinity of the stations would not receive any more disproportionate impacts following the station changes than they currently receive. As such, operations of the Concord and Sacramento Stations following the equipment changes would have no impact on high-minority and low-income populations.

D.14.2.7 Cumulative Impacts

A regional scale environmental justice analysis such as that conducted above takes existing conditions into consideration and is in effect a cumulative analysis. In many places in the country, areas in which existing pipelines and industry exist are also home to low-income and high minority populations. In these situations, the low-income and high minority populations are often already facing disproportionate impacts due to existing conditions. In the case of the Proposed Project, however, most areas along the pipeline route can generally be classified as low-density industrial, low-density urban/suburban, and low-density agricultural. As discussed above, the Proposed Project would contribute only an incremental increase to the industrialization of these areas. The low-density nature of the majority of the populations along the pipeline route reduces the potential for disproportionate impacts, particularly in the industrial and urban/suburban areas where there are greater numbers of existing conditions as well as new projects, which could also exacerbate conditions.

D.14.3 Environmental Impacts and Mitigation Measures for Existing Pipeline ROW Alternative

The Existing Pipeline ROW Alternative follows the UPRR ROW for nearly the entire length of the pipeline and runs parallel and would be near the Proposed Project corridor along many areas. As such, the pipeline corridor for the Existing Pipeline ROW Alternative mirrors the corridor of the Proposed Project and also crosses many of the same census block groups crossed by the Proposed Project. In Contra Costa and Sacramento Counties, the Existing Pipeline ROW Alternative passes through fewer total block groups, but the path of the UPRR through the agricultural lands in Solano and Yolo Counties traverses a greater total number of block groups than the Proposed Project. The number of upper-third minority block groups within the Existing Pipeline ROW Alternative corridor is lower than other block groups in all of the counties, although the route traverses a greater total number of upper-third minority block groups than the Proposed Project. The number of lower-third income block groups within the Existing Pipeline ROW Alternative corridor is also greater than the Proposed Project, and is disproportionately greater than other block groups along the route in Contra Costa, Solano, and Yolo Counties.

The Concord and West Sacramento areas of the Existing Pipeline ROW Alternative include many heavy industrial areas with a few scattered residences in the vicinity of the corridor. Like many of the Proposed Project segments, the majority of the Existing Pipeline ROW Alternative would traverse open space and agricultural lands, within an existing pipeline and railroad ROW. Although residences about the railroad ROW in the Davis, Elmira, and Dixon areas, due to the low number and density of residences and other sensitive receptors in general along the pipeline corridor and the location of the Existing Pipeline along existing ROWs, construction impacts of the alternative are not expected to disproportionately impact high-minority and low-income populations. The Existing Pipeline ROW Alternative would likely have greater impacts than the Proposed Pipeline because of the additional number of upper-third minority and lower-third income census block groups within its corridor.

As with the Proposed Project, impacts resulting from pipeline accidents (Impact EJ-2) along the Existing Pipeline ROW Alternative would affect a larger number of high-minority and low-income populations. Environmental justice impacts resulting from an accidental spill would be significant, but through the implementation of Mitigation Measure EJ-2a, residual impacts would be less than significant.

Normal operational of the Existing Pipeline ROW Alternative (Impact EJ-3) would be no different than current operational impacts of the existing pipeline and would not change the ways, if any, that the pipeline currently affects minority and low-income populations. The census block groups along the pipeline corridor would not receive any more disproportionate impacts from operation of the Existing Pipeline ROW Alternative than they currently receive. As such, normal operation of the Existing Pipeline ROW Alternative would have no impact on minority and low-income populations. There would be no difference in environmental justice impacts between the operation of the Existing Pipeline ROW Alternative and the Proposed Pipeline.

Overall, with respect to the level of potential environmental justice impacts, the Proposed Pipeline is marginally superior to the Existing Pipeline ROW Alternative.

Mitigation Segment EP-1

While Mitigation Segment EP-1 was developed to avoid sensitive habitat in the slough and marshland, the reroute places the pipeline along rural roads. There would be no difference in the census block groups affected within one-half mile of the pipeline. As such, there is no evidence that the reroute would disproportionately impact low-income or high-minority populations. There would be no difference in Impacts EJ-1 (disproportionate impacts from pipeline construction), EJ-2 (disproportionate impacts from pipeline accident), and EJ-3 (disproportionate impacts from pipeline operation) between EP-1 and the Existing Pipeline ROW Alternative.

Mitigation Segment EP-2

Mitigation Segment EP-2 would diverge from the Existing Pipeline Alternative route southwest of the City of Davis into agricultural and open space lands. As with Mitigation Segment EP-1, there would be no difference in the census block groups affected within one-half mile of the pipeline. The reroute would avoid passing near residences along the railroad ROW followed by the Existing Pipeline Alternative in Davis, but there is no basis to expect that there would be environmental justice impacts caused by the Existing Pipeline ROW Alternative. As such, while reroute EP-2 would, in general, avoid impacts to residences in Davis, there is no reason to expect that the reroute would reduce Impacts EJ-1 (disproportionate impacts from pipeline construction), EJ-2 (disproportionate impacts from pipeline accident), and EJ-3 (disproportionate impacts from pipeline operation) relative to the Existing Pipeline ROW Alternative.

D.14.4 Environmental Impacts of the No Project Alternative

As described in Section B.3.1, Description of the Proposed Pipeline, the capacity of the current pipeline system from Concord to Sacramento is 152,000 BPD. With increases in petroleum product demand expanding annually by 2.5%, the current system would reach capacity in 2006. The No Project Alternative would represent continuation of the existing effects of regional development patterns on high-minority and low-income populations including the following:

- Continuation of the existing impacts of industry-related environmental effects.
- After the system reaches capacity in 2006, the SFPP existing pipelines would need booster pump stations and possibly segment requirements. In addition, train and truck transportation for petroleum products may also be necessary to meet demand. All of these activities would generate air quality, noise, and traffic impacts.
- Increasing risk of accidental spills and upset situations resulting from continued use of older existing pipelines and from trains and trucks transporting petroleum products.
- Mitigation measures associated with the Proposed Project intended to alleviate existing burdens would not occur for communities along the associated transportation corridors.

Accidental spills resulting from the transport of petroleum products (see Section D.2, Impact PS-4) could cause environmental justice impacts, which in the absence of mitigation would be considered to be a significant impact (Impact EJ-2). Due to the area and distances that transport trucks would travel, however, there is no evidence to suggest that long-term emissions from products transported by trucks (see Section D.3, Impact A-4), would disproportionately affect high-minority and low-income populations. Such impacts are not quantifiable, however, because transportation alternatives are not well enough defined to determine whether any census block group is more likely than another to be impacted.